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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/790,965	03/02/2004	Jathan D. Edwards	53868US05	2139

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Attention: Eric D. Levinson
Imation Corp.
Legal Affairs
P.O. Box 64898
St. Paul, MN 55164-0898

EXAMINER

BODAWALA, DIMPLE N

ART UNIT	PAPER NUMBER
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1722

MAIL DATE	DELIVERY MODE
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05/25/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/790,965

Applicant(s)

EDWARDS ET AL.

Examiner

Dimple N. Bodawala

Art Unit

1722

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 30-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 30-35 is/are allowed.
- 6) ☒ Claim(s) 36-46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 8/11/2004.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 36-39 and 41 are rejected under 35 U.S.C. 102(b) as being anticipated by Suzuki et al. (U S Patent No. 4,947,384)

Suzuki et al ('384) discloses the master stamper (See col.4 line 41) which comprises the data layer (5) on the lower side surface of the stamper; and a stamper pattern formed in the data layer (5) defined by adjacent stamper lands (3) and the stamper grooves (2) (See col.1 lines 11-16), wherein the stamper grooves (2) extend down into the stamper surface, wherein the groove (2) defines the groove bottom and the stamper land defines the stamper land top. It further teaches that the track pitch is less than 425 nanometer by providing 1.6 micro inches, which converts to 40.64 nanometer (See col.1 lines 49-67). Figure 2 teaches that the groove bottoms are flat and coplanar, while figure 3 teaches that the groove bottoms include sharp corners. It further teaches that the width of the groove bottom is 0.8

Art Unit: 1722

micro inches, which converts to 20.32 nanometer, which value is greater than 35 percent of the track pitch (See col.1 lines 49-67). It further teaches that the depth of the groove is one eighth of the reading laser beam wavelength, thus inherently discloses a groove depth within the claimed range based on the desired depth related to the laser beam wavelength (See col.1 lines 49-67).

Claim 41 of the instant application contains the method step for the production of the claimed the second-generation stamper, which is created from a first generation stamper. With regard to the claim recitations regarding the method of forming the apparatus, such relate to the method of producing the claimed apparatus, which does not impart patentability to the apparatus claims. The determination of patentability is based on the product apparatus itself, *In re Brown*, 173 USPQ 685, 688, and the patentability of a product does not depend on its method of production, *In re Pilkington*, 162 USPQ 145, 174; see also *In re Thorpe*, 227 USPQ 964 (AFC 1985). Therefore, claim 41 is anticipated by Suzuki ('384).

Suzuki ('384) discloses all claimed structural limitations, and, thus, the claims are anticipated.

Claim Rejections - 35 USC § 103

Art Unit: 1722

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in

order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 42-46 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Suzuki et al. (U S Patent No. 4,947,384).

Suzuki et al ('384) discloses the master stamper (See col.4 line 41) which comprises the data layer (5) on the lower side surface of the stamper; and a stamper pattern formed in the data layer (5) defined by adjacent stamper lands (3) and the stamper grooves (2) (See col.1 lines 11-16), wherein the stamper grooves (2) extend down into the stamper surface, wherein the groove (2) defines the groove bottom and the stamper land defines the stamper land top. It further teaches that the track pitch is less than 700 nanometer as well as 425 nanometer by providing 1.6 micro inches, which converts to 40.64 nanometer (See col.1 lines 49-67). Figure 2 teaches that the groove bottoms are flat and coplanar, while figure 3 teaches that the groove bottoms include sharp corners. It further teaches that the width of the groove bottom is 0.8 micro inches, which converts to 20.32 nanometer, which value is greater than 35 percent of the track pitch (See col.1 lines 49-67). It further teaches that the depth of the groove is one eighth of the reading laser beam

Art Unit: 1722

wavelength, thus inherently discloses a groove depth within the claimed range based on the desired depth related to the laser beam wavelength (See col.1 lines 49-67).

Claims 42 and 46 of the instant application contain the method step for the production of the second-generation stamper, which is created from a first generation stamper, and also the laser spot size associated with a laser used to perform laser etching of the master pattern of the master disk. With regard to the claim recitations regarding the method of forming the apparatus, such relate to the method of producing the claimed apparatus, which does not impart patentability to the apparatus claims. The determination of patentability is based on the product apparatus itself, *In re Brown*, 173 USPQ 685, 688, and the patentability of a product does not depend on its method of production, *In re Pilkington*, 162 USPQ 145, 174; see also *In re Thorpe*, 227 USPQ 964 (AFC 1985). Therefore, claims 42 and 46 are being unpatentable over the prior art, *Suzuki* ('384).

Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Suzuki et al.* (U S Patent No. 4,947,384).

Suzuki ('384) discloses all claimed structural limitations as discussed above. It further teaches that the width of the groove bottom is about 50 percent of the track pitch, however

Art Unit: 1722

does not disclose the width of the groove greater than 50 percent of the track pitch.

It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the invention of Suzuki ('384) by providing the width of the groove greater than 50 percent of the track pitch because such an alignment supports the preformat portion and the recording portion to decrease the read out error of the address signal and obtain a track crossing signal enlarged above a threshold value (See col. 4 lines 50-55).

Allowable Subject Matter

Claims 30-35 are allowed.

The following is an examiner's statement of reasons for allowance:

The prior art of record fails to teach or suggest a stamper for use in creating replica disk substrate as defined in the claims 30-35 of the instant application. The closest prior art, Suzuki et al. (U S Patent No. 4,947,384) discloses all claimed structural limitations as discussed above, however Suzuki ('384) fails to teach or suggest that the groove bottoms are wider than the land tops as recited in claim 30 of the instant application.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to

Art Unit: 1722

avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. (For further references see PTOL-892).

Sandstrom (U S Patent No. 6,382,955) discloses molding apparatus which comprises the track pitch 0.37 micrometer or less (See col.4 lines 1-4), which converts to 370 nanometer that is less than 450 nanometer as well as less than 700 nanometer.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dimple N. Bodawala whose telephone number is (571) 272-6455. The examiner can normally be reached on Monday - Friday at 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Yogendra N. Gupta can be reached on (571) 272-1316. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1722

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DNB


JAMES P. MACKEY
PRIMARY EXAMINER

5/23/07